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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,232	11/30/2001	Bruce R. Scharf	005557.P005	9239

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Todd M. Becker  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP  
Seventh Floor  
12400 Wilshire Boulevard  
Los Angeles, CA 90025-1026

EXAMINER

PHAN, JAMES

ART UNIT PAPER NUMBER

2872

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/000,232

Applicant(s)

SCHARF ET AL.

Examiner

James Phan

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,5,10,12,13,15,20,22,23,25 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,6-9,11,14, 16-19,21,24,26-29 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

The amendment filed 12/12/05 overcomes all of the objections and the rejection under 35 U.S.C.112, first paragraph, made in the office action mailed 8/9/05.

The declaration filed 12/12/05 overcomes the rejection of claims 1, 4, 6-9, 11, 14, 16-19, 21, 24, 26-29 under 35 U.S.C.102(e) made in the office action mailed 8/9/05.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 6-7, 9, 11, 14, 16-17, 19, 21, 24, 26-27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Floyd et al (Pat. No. 6002,507) in view of Mertz (5,995,071).

In regard to claims 1, 4, 6, 9, 11, 14, 16, 19, 21, 24, 26 and 29, Floyd et al '202 discloses a micro-opto-electromechanical laser scanner comprising a silicon-on-insulator (SOI) substrate wafer (100) having a single crystal silicon (SCS) layer (130) separate by an insulator layer (116) from a silicon substrate layer (115), a radiation source (laser diode 105) attached to the silicon substrate layer for emitting light beam to a torsional mirror (150) via a deflecting mirror (140) formed on the SCS layer for scanning a surface to be scanned. Floyd et al et al '202 does not disclose a pattern

formed on either deflecting mirror or torsional mirror for focusing or collimating the scanning light beam. Since it is well known that light emitted from the radiation source is a divergent light, a focusing or collimating lens, a focusing or collimating mirror, or a focusing or collimating grating, etc., is needed to focus or collimate the scanning light depending on a particular application; and since the use of diffractive micro Fresnel mirror formed from an electrically conducting material in place of a focusing or collimating mirror or lens for focusing or collimating a light beam is well known (Merzt, Figs. 2-5, and the accompanying text). It would have been obvious to one of ordinary skill in the art to form a Fresnel pattern, as taught in Merzt, on either mirror 140 or mirror 150 in Floyd et al in order to provide Floyd et al a laser scanner with a collimating or focusing light without an additional optical element so as to scan the surface to be scanned with a collimating light or a focusing light depending on a particular application and to make the modified laser scanner compact and light in weight.

In regard to claims 7, 17 and 27, see Floyd et al, column 3, lines 3-4, or Merzt, column 6, lines 2-3.

Claims 8, 18 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Floyd et al (Pat. No. 6002,507) in view of Mertz (5,995,071) as applied to claims 1, 4, 6-7, 9, 11, 14, 16-17, 19, 21, 24, 26-27 and 29 above, and further in view of Kubby et al (Pat. No. 6,362,512).

The combination above lacks the showing of gold for the reflecting coating. However, gold is well known for its high reflectivity in scanning art (Kubby et al, column

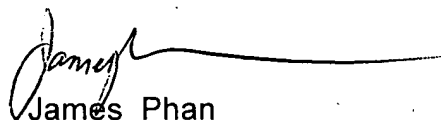
7, line 18, step process 67). Thus, it would have been obvious to one skilled in the art to use gold instead of aluminum (see the rejection of claims 7, 17 and 27 above) as an alternative for the reflective coating so as to increase the reflectivity of the mirrors.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Phan whose telephone number is (571) 272-2317. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
James Phan  
Primary Examiner  
Art Unit 2872